



Overhauled gas drainage drill rig

## A unique capability, Berendsen successfully carries out gas drainage drill rig overhaul for underground coal mine

Berendsen Wollongong recently overhauled an underground gas drainage drill for a long standing mining customer in the Illawarra region. This is a job not many hydraulic suppliers can perform as it requires a high level of expertise in hydraulic trouble shooting, engineering and practical experience.

### THE PROJECT

Berendsen Wollongong was recently awarded the overhaul of an underground gas drainage drill for an Illawarra coal mine. The drill rig is used to drill holes in the coal seam ahead of the longwall in an underground coal mine, so that methane gas can be drained to reduce the risk of outburst.

Berendsen Wollongong have previously conducted a range of hydraulic repair and supply jobs for this particular mining customer, across all areas of the coal mine including cylinder repairs on development, gas drainage, longwall and surface equipment. Berendsen Wollongong have also performed Mancar and Dollycar upgrades, gas drainage rig and gas drainage reamer overhauls as well as supplied filters and various hydraulic components to the customer.



Condition of gas drainage drill rig prior to overhaul

Berendsen Wollongong were chosen to perform the hydraulic overhaul on the drill rig due to their proven repair history with the machines, expert staff and the engineering support to complete the job successfully.



The rig had been sitting idle on surface for almost 2 years, numerous components had gone missing and so a full mechanical and electrical overhaul was required to return the machine to service.

### THE SOLUTION

The overhaul process began with stripping the existing machine, establishing the scope and quoting the customer.

Berendsen Wollongong then repaired existing hydraulic components where possible and ordered and installed new components where required. This involved:

- ✓ Repairing and replacing hydraulic cylinders – Tilt and feed cylinders were overhauled and track tension cylinders were supplied new and installed
- ✓ Welding the structure where it had been damaged or where welds had cracked
- ✓ Cleaning the tanks
- ✓ Replacing the hoses and stainless pipework – All of the hydraulic hosing and stainless steel pipework was supplied new and installed compliant to MDG41.
- ✓ Repairing the gearboxes, pumps and motors – Including crawler motors and gearboxes, 2 axial piston pumps, 2 gear pumps, a rotation unit motor and gearbox
- ✓ Replacing other parts that required replacement - Including track components such as track chain and rollers, track idler springs, heat exchangers, valves, accumulator and all wear plates and slides

The drill rig was reassembled in-house at the Wollongong branch workshop and then sent to the electrical contractor's premises for electrical repair and testing.

The functionality and safety of the machine was fully tested to OEM requirements. It was cleaned and painted and then delivered to the mine site. All hydraulic schematics were updated, and MDG41, MDG35.1 and MDG10 audits were completed. Berendsen Wollongong also provided the customer with a critical spares list and maintenance schedule.

### RESULT

Berendsen completed the project with nil variations to original scope and delivered within the specified time frame that was initially provided to the customer during the quoting stage. The hydraulic overhaul was handled by 4 of Wollongong branch's team of qualified fitters in conjunction with the electrical contractor over a period of 12 weeks. The majority of the work was performed in-house at the Wollongong branch workshop.

At the completion of the project, the underground gas drainage drill rig passed the coal mine's introduction to site process, deemed compliant to standards and could operate safely and effectively underground for up to 4 years or more.

As Australia's leading hydraulic provider for over 20 years, Berendsen is experienced in a variety of hydraulic service types for all types of hydraulic systems, machinery and equipment. Our branches Australia-wide are equipped with the expertise and tools to conduct service such as hydraulic overhauls, cylinder repair service, field and emergency service, hose service, lubrication unit service, preventative maintenance and pump and motor repair.

If you are looking for a customised hydraulic solution to suit the needs of your business, contact Berendsen Fluid Power today on 1800 814 411.



Commissioning of drill rig